

1. Given: $RS = ST$; $RU = UT$
Prove: $\triangle RSU \cong \triangle TSU$

Statements	Reasons
1. $RS = ST$; $RU = UT$	1. Given
2. $SU = SU$	2. Reflexive
3. $\triangle RSU \cong \triangle TSU$	3. SSS

2. Given: D is the midpoint of \overline{AC} ; $AB = BC$
Prove: $\triangle ABD \cong \triangle CBD$

Statements	Reasons
1. D is the midpoint of \overline{AC} ; $AB = BC$	1. Given
2. $AD = DC$	2. def of midpt
3. $DB = DB$	3. Reflexive
4. $\triangle ABD \cong \triangle CBD$	4. SSS

3. Given: \overline{HF} bisects $\angle EHG$; $EH = GH$
Prove: $\triangle EFH \cong \triangle GFH$

Statements	Reasons
1. \overline{HF} bisects $\angle EHG$; $EH = GH$	1. Given
2. $\angle 1 \cong \angle 2$	2. def of \angle bis
3. $FH = FH$	3. Reflexive
4. $\triangle EFH \cong \triangle GFH$	4. SAS

4. Given: L is the midpoint of \overline{KM}
L is the midpoint of \overline{JN}
Prove: $\triangle JLK \cong \triangle NLM$

Statements	Reasons
1. L is the midpoint of \overline{KM} L is the midpoint of \overline{JN}	1. Given
2. $JL = LN$	2. Def. of midpoint
3. $ML = LK$	3. Def. of midpoint
4. $\angle 1 \cong \angle 2$	4. Vertical \angle s are \cong
5. $\triangle JLK \cong \triangle NLM$	5. SAS

5. Given: $\overline{RO} \parallel \overline{AD}$; $RO = AD$
 Prove: $\triangle RDO \cong \triangle AOD$

Statements	Reasons
1. $\overline{RO} \parallel \overline{AD}$; $RO = AD$	1. Given
2. $\angle 1 \cong \angle 3$	2. If \parallel , alt. int. \angle s are \cong
3. $DO = DO$	3. Reflexive
4. $\triangle RDO \cong \triangle AOD$	4. SAS